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# Certificate

PATENTKANTOOR

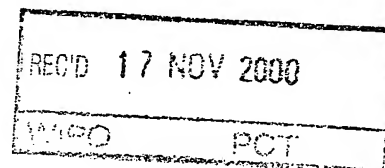
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provisional specification and drawings of South African Patent Application No. 99/6243 filed in  
the name of ZOCK, Joe



Filed : 30.09.99  
Entitled : AN INTERACTIVE COMPUTER-BASED  
GAMING SYSTEM

## PRIORITY DOCUMENT

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Registraireur van Patente  
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71	ZOCK, Joe				
APPLICANTS SUBSTITUTED:					
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DATE REGISTERED					
ASSIGNEE(S)					
71					
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FULL NAME(S) OF INVENTOR(S)					
72	ZOCK, Joe				
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TITLE OF INVENTION					
54	AN INTERACTIVE COMPUTER-BASED GAMING SYSTEM				
ADDRESS OF APPLICANT(S)/PATENTEE(S)					
89 CORLETT DRIVE, BIRNAM, JOHANNESBURG, SOUTH AFRICA					
ADDRESS FOR SERVICE				S AND F REF	
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REPUBLIC OF SOUTH AFRICA  
PATENTS ACT, 1978

## PROVISIONAL SPECIFICATION

(Section 30(1) - Regulation 27)

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22	30.09.99
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FULL NAME(S) OF APPLICANT(S)

71	ZOCK, Joe
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FULL NAME(S) OF INVENTOR(S)

72	ZOCK, Joe
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TITLE OF INVENTION

54	AN INTERACTIVE COMPUTER-BASED GAMING SYSTEM
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### BACKGROUND OF THE INVENTION

THIS invention relates to an interactive computer-based gaming system.

Gaming systems and lotteries in which players actively participate in a game and win money according to the outcome of the game are hugely popular. Apart from lotteries, most games of this type are played in secured environments such as casinos, which are not accessible to everyone.

One significant disadvantage of lotteries is that the player has minimal input, and has very little or no control both over manipulation of the odds and over manipulation of the outcome of the game.

### SUMMARY OF THE INVENTION

According to the invention there is provided an interactive computer-based gaming system comprising funds acceptance means, game control means responsive to the funds acceptance means, user interface means, game display means controlled by the game control means and the user interface means, and funds delivery means responsive to the outcome of the game, the game display or presentation means including a plurality of legs and the game control means comprising generator means for generating a plurality of object strings from a set of objects, and computation means, each leg being arranged to receive at least one object drawn from the set of objects, whereby the game control means is arranged to compute a payout in the event of a predetermined correlation existing between the at least one drawn object and the object string in respect of a particular leg and to allow the player to receive at least a portion of the payout or to progress to the next leg.

In a preferred form of the invention, the control and display means are responsive to the user interface means, which includes first odds varying means for varying the odds in a particular leg during play.

The first odds varying means may include drawn object varying means for varying the number of potentially winning objects in the set by adding to or subtracting from the number of potentially winning objects in a leg.

The first odds varying means may further include object string varying means for varying the number of generated objects in the string which are to be correlated with the drawn objects.

Preferably, the gaming system includes second dynamic wager varying means for enabling the wager or stake on each leg to be varied as the game progresses.

Conveniently, the funds withdrawal and computation means include third dynamic withdrawal means for enabling a player-determined percentage of the payout to be withdrawn during the course of the game..

The object strings are preferably randomly or pseudo-randomly generated number strings, with the objects being numbered from 0 - 9.

The drawn objects may be player-designated or drawn, or alternatively may be generated in a random or pseudo-random fashion by the generator means.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

- Figure 1** shows a highly schematic block diagram of a computer-based gaming system of the invention;
- Figure 2** shows a typical printout of an interactive display screen forming part of the gaming system and illustrating an exemplary game in progress; and
- Figure 3** shows a flowchart illustrating the main routine which the gaming system of the invention follows; and
- Figures 4A to 4G** show flowcharts illustrating the various sub-routines followed by the gaming system of the invention.

## DESCRIPTION OF EMBODIMENTS

Referring first to Figure 1, a gaming system 10 of the invention has at its heart a software-based game controller 12 for controlling the operation of the game. Funds acceptance means 14 such as a debit or credit card acceptance device, a cash acceptance device or a modem-link funds transfer device is connected to the game controller 12. Similarly, the game controller 12 is connected via an output to funds delivery means 16. The funds delivery means 16 may also form part of a modem-linked funds transfer system. An internal account database 18 is incorporated into the software of the game controller 12, and keeps track of the debit or credit status of the player's account. A user interface 20 is connected to the game controller 12, and may take the form of a keypad, a mouse, a joystick or any other conventional user interface device which interfaces with a screen 22 providing an interactive screen display of the type illustrated in Figure 2 and generated by the software at the heart of the game controller 12.

The operation of the game will now be described with reference to the flowcharts of Figures 3 and 4A to 4G with reference to the typical display screen printout of Figure 2. In order to start a game, the details of a particular player are entered, as is shown in Figure 3, and the identified player is then required to enter some form of legal tender into the system via the funds acceptance means 14. This may be achieved in a number of ways, including physical notes and coins, a debit or credit card reader, a smart card reader or any other funds transfer routine from a player's account using a suitably secured funds transfer method. The value of the tender accepted by the funds acceptance means is stored in the internal account database 18 which keeps a running tally of the balance in the player's account. It is then created in the manner indicated in the Figure 4B sub-routine.

The display screen of Figure 2 shows a typical betting card 24. This takes the form of a 10x10 matrix divided into 10 columns or legs 24.1 to 24.10. At the start of the game, a series of 10 numbers are drawn by a random or pseudo-random number generator. In the example illustrated in Figure 2, the number series 9 5 2 2 2 1 2 4 7 2 is generated, with each successive number appearing at the head of each column 24.1 to 24.10. The player then has a chance to lay his or her wager. The wager is variable for each card 24, and can be increased or decreased using the arrows 26. For each wager laid by the player, the card's background, or some other designated area of the card 24, becomes a colour which is specific to the amount laid in order to remind the player of the amount which has been laid. Naturally, the player's credit is constantly monitored, and the player is notified if there is insufficient credit to continue. Each of the above numbers represents a single winning number in the 10 legs provided on the betting card 24.

There are a number of different ways in which the betting card can be customized to suit the needs of the player. As a first option, subtract and add "buttons" 28 and 30 can be used to increase or decrease the number of required numbers per column. By way of example, by clicking on the add button 30 three times, the additional numbers 7, 5 and 0 appear in the first column 24.1 as potential winning numbers. If the player has bet R1.00 for the initial series of 10 numbers, it will cost the player an additional R1.00 to place each of the additional numbers 7, 5 and 0. The player then continues to prepare the betting card by adding a number (2) to the second column 24.2. Since R1.00 stakes are being used, the amount bet will effectively double to R2.00. The addition of the winning numbers 8 and 4 in the third column 24.3 will increase the stake to R4.00, and the wager will be increased to R8.00 by addition of three more numbers in the fourth column 24.4. It can clearly be seen that the original R1



wager has been increased to R96 by virtue of the player increasing the chances of winning by  $4 \times 2 \times 3 \times 4 = 96$ . The R96.00 wagered amount is indicated at 32.

In addition to the betting card 24, a results card 34 is also generated on the screen. The results card comprises a similar  $10 \times 10$  matrix, with the various columns 34.1 to 34.10 corresponding to the columns 24.1 to 24.10. For ease of reference, each successive row in each of the columns is colour coded in the order brown, dark green, light blue, dark blue, purple, light green, red, violet, yellow and blue. In Figure 2, all of the results appear on the results card. This would only occur after a particular card had been completed. In the particular example, still further adjustments are made to the betting card 24 before generation of the results card. In particular, a further manner of varying the odds is by way of up and down arrows 36 and 38 respectively. Figures 4C and 4D illustrate the sub-routines involved in doing so. These are used to adjust, in a lower row selector square 40, the number of rows in each column which are to be taken into consideration when comparing the betting legs of columns 24.1 to 24.10 with the corresponding results columns 34.1 to 34.10. In the results columns 34.1 to 34.10, the numbers being considered are highlighted so as to distinguish them from the numbers in the results column which are not being considered. By way of example, in the first three row select squares 40.1, 40.2 and 40.3, the first three rows of numbers have been selected for the first three columns 34.1 to 34.3 as indicated by the brown, dark green and light blue bands 41. In the fourth row select square 40.4, the first four rows have been selected, with the addition of the purple band 41.1. This increases the winning odds, but as a result the goal or winning total is proportionately reduced. In the present case, for example, the winning total is reduced by a factor of  $3 \times 3 \times 3 \times 4 = 108$ .

Once the betting card has been set up, the start button 42 is clicked on, and this has the effect of generating the first string of numbers in the results card 34. In

the particular Figure 2 example, the first three numbers, namely 9, 7 and 6, are compared with the corresponding numbers appearing in the first column of the betting card, namely 9, 7, 5 and 0, with there being a direct correlation between the numbers 9 and 7. These numbers are then highlighted on the betting card so as to indicate that they are winning numbers. The winnings are then indicated at 44, and dynamic withdrawal means in the form of a window (not shown) appear on the screen allowing the player to vary the percentage of winnings from 0% to 100% that he or she wants to bank. By way of example, if the player has won R100, then by indicating 25% and subsequently clicking on the "take" button 48, 25% is deducted from the current card value, and R25 is added to the balance. Figure 4F indicates the payout sub-routine. The player then cycles through each column in the results card until the card is full. As the player progresses, provided there is sufficient balance in the account for obtaining the result for a particular column, the player may adjust the number of digits in each results column which are to be considered by manipulating the up and down arrows 36 and 38 respectively. At the same time, the player may withdraw a portion of the current value of any valid card at any point in the game.

The player also has the option of activating the odds or evens "button" 50, at the same time wagering an amount on the next number in the results card being odd or even. If applicable, the player's winnings are added to the balance. The odds and evens sub-routine is illustrated in more detail in Figure 4E.

The gaming system of the invention can be played in numerous different forms. For example, it may be a casino-based game, it can be played as a lottery, or it can be internet-based, in which case it can be downloaded from a central secured server onto a player's terminal.

DATED THIS 30<sup>TH</sup> DAY OF SEPTEMBER 1999

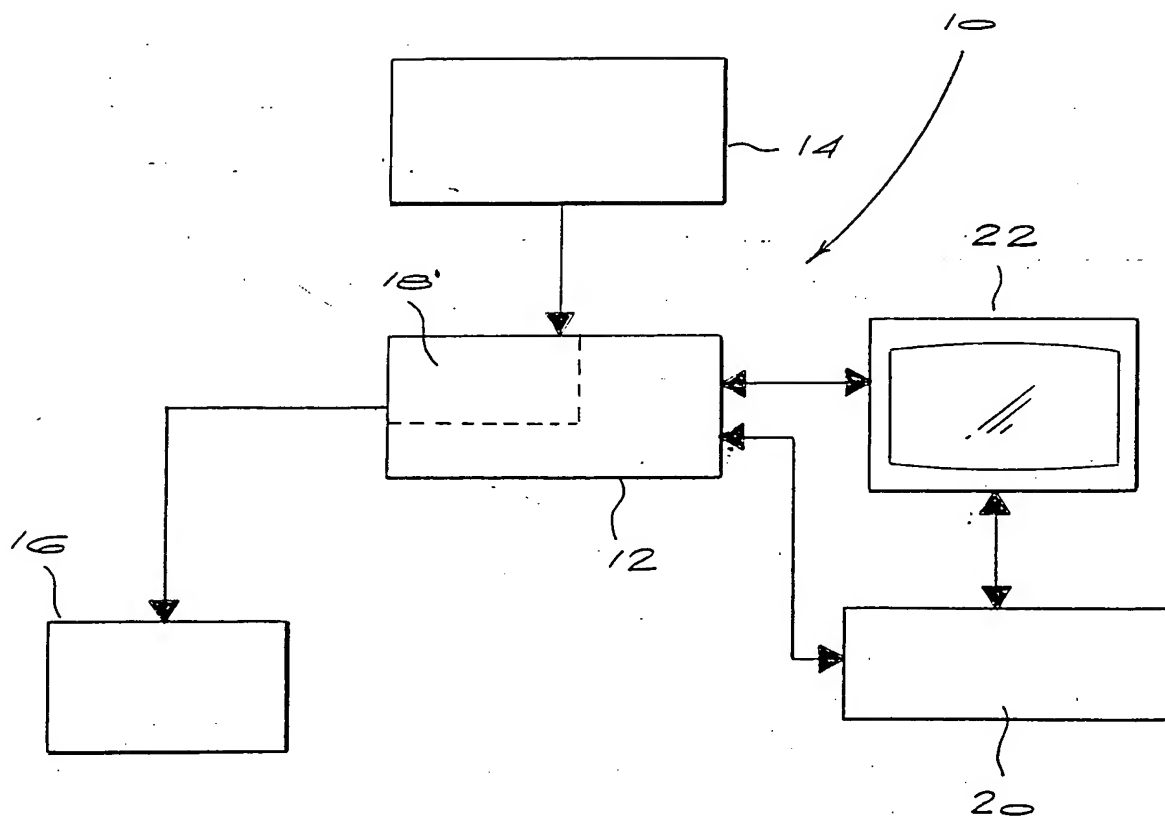
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*Wf*  
*Wca*

SPOOR AND FISHER

APPLICANT'S PATENT ATTORNEYS

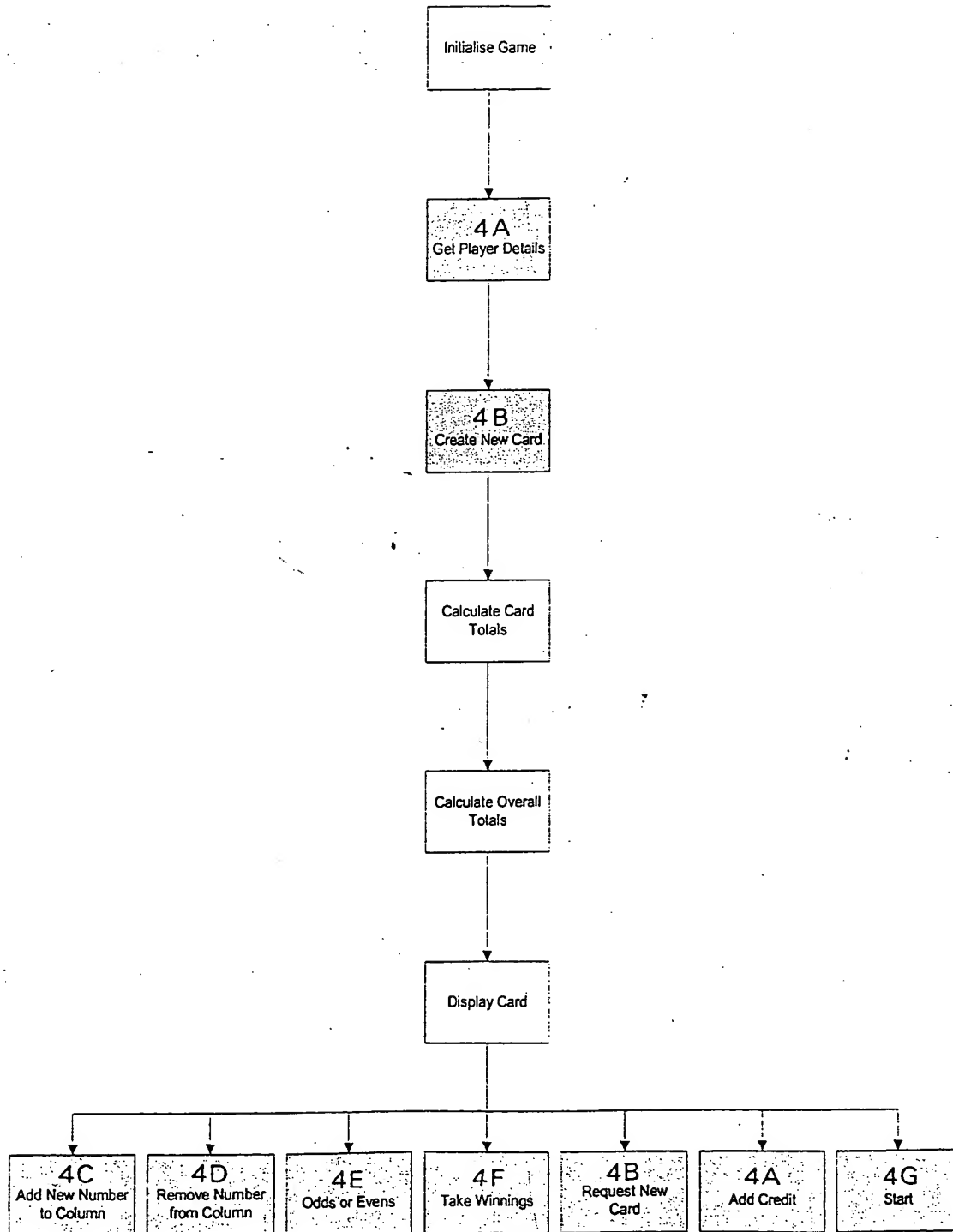
FIG 1



*ref*  
*man*

[illegible]

Fig 3



*WJ*  
*WJ*

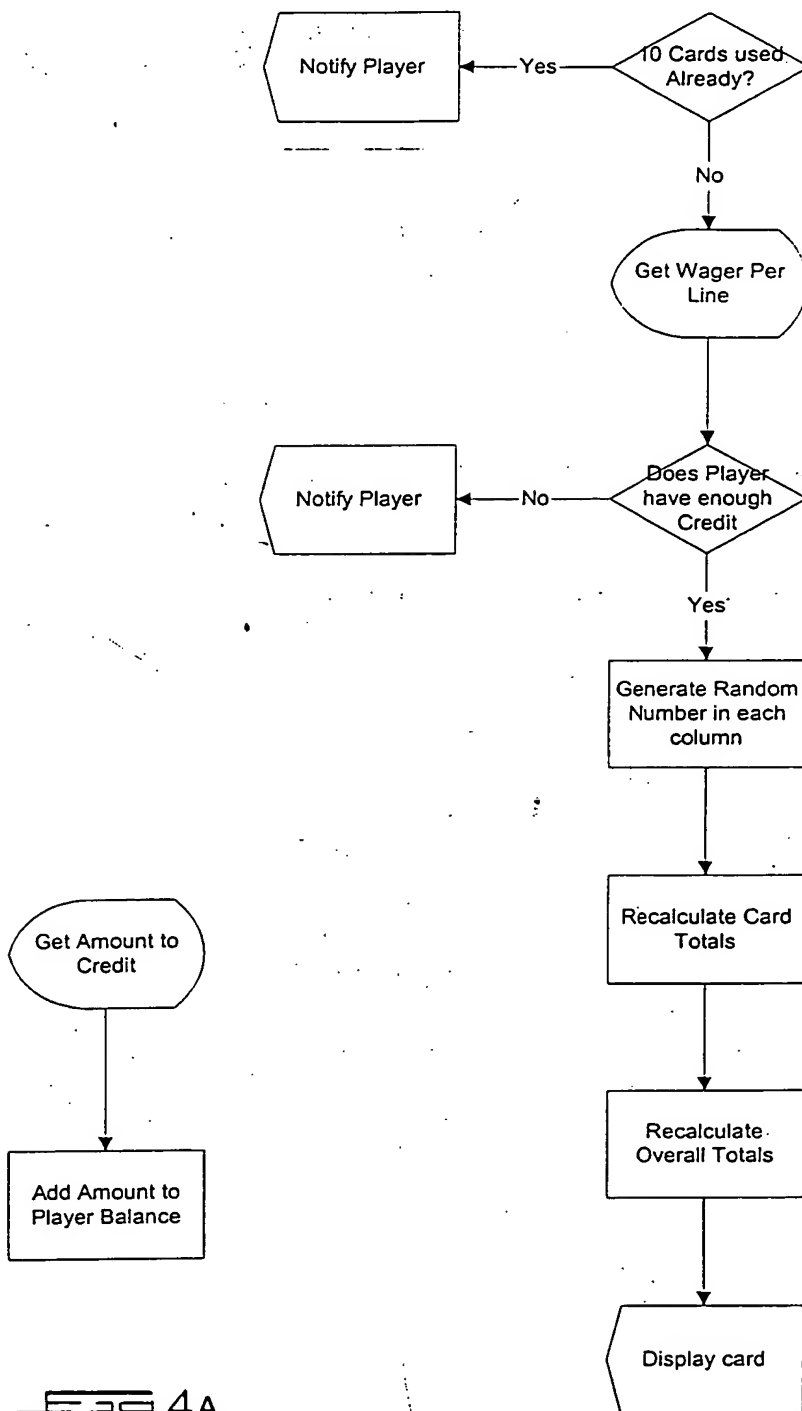


FIG 4A

FIG 4B

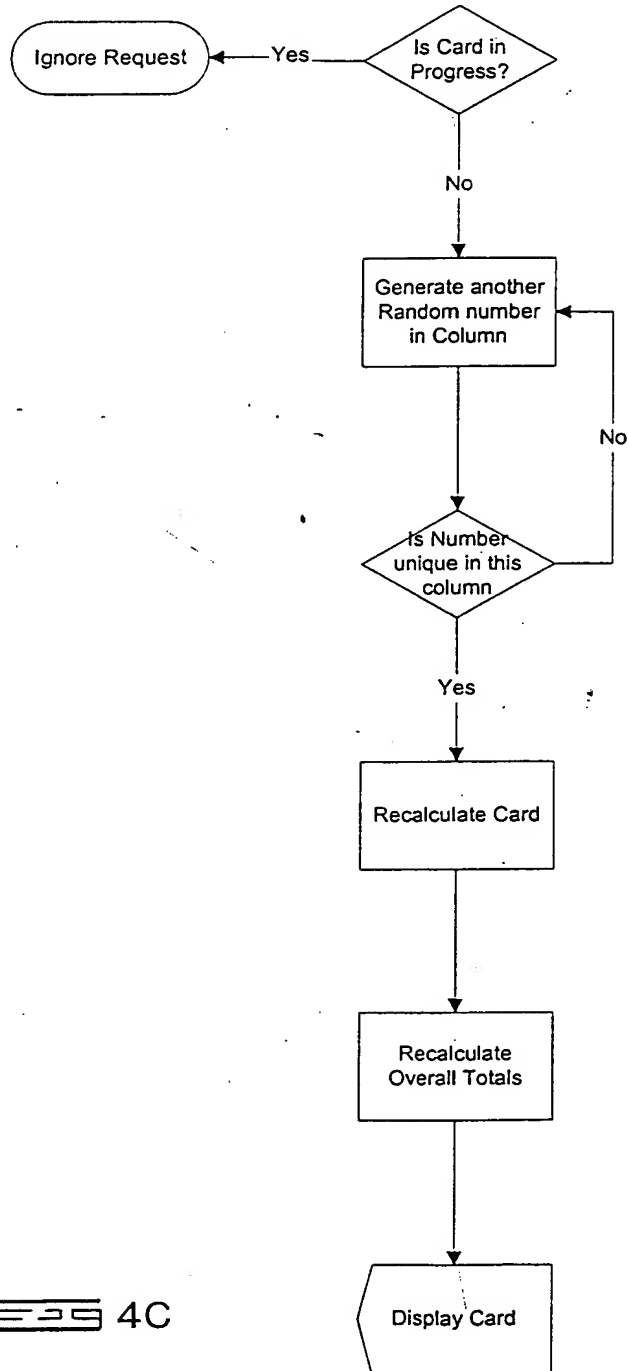
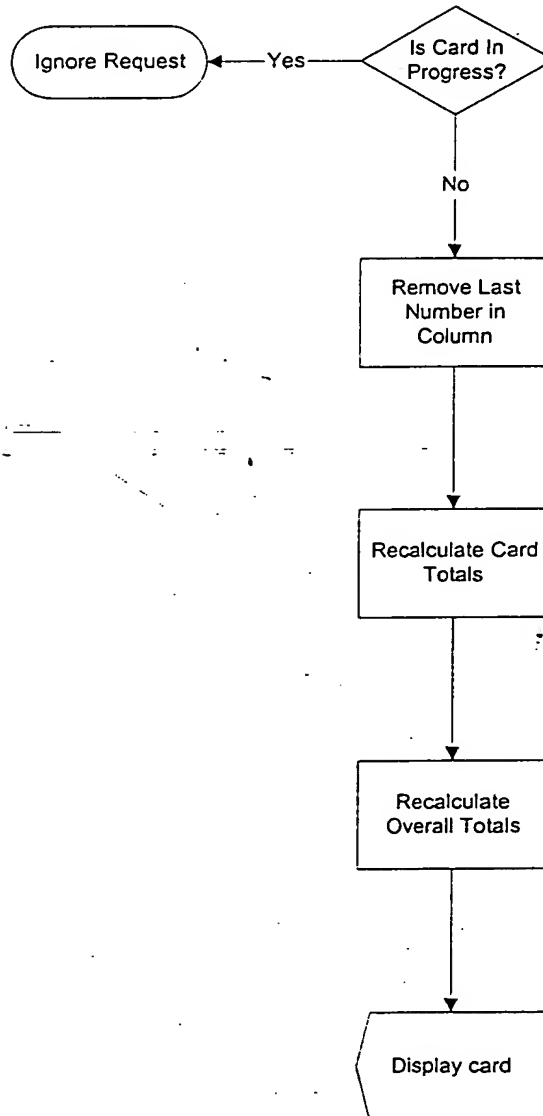
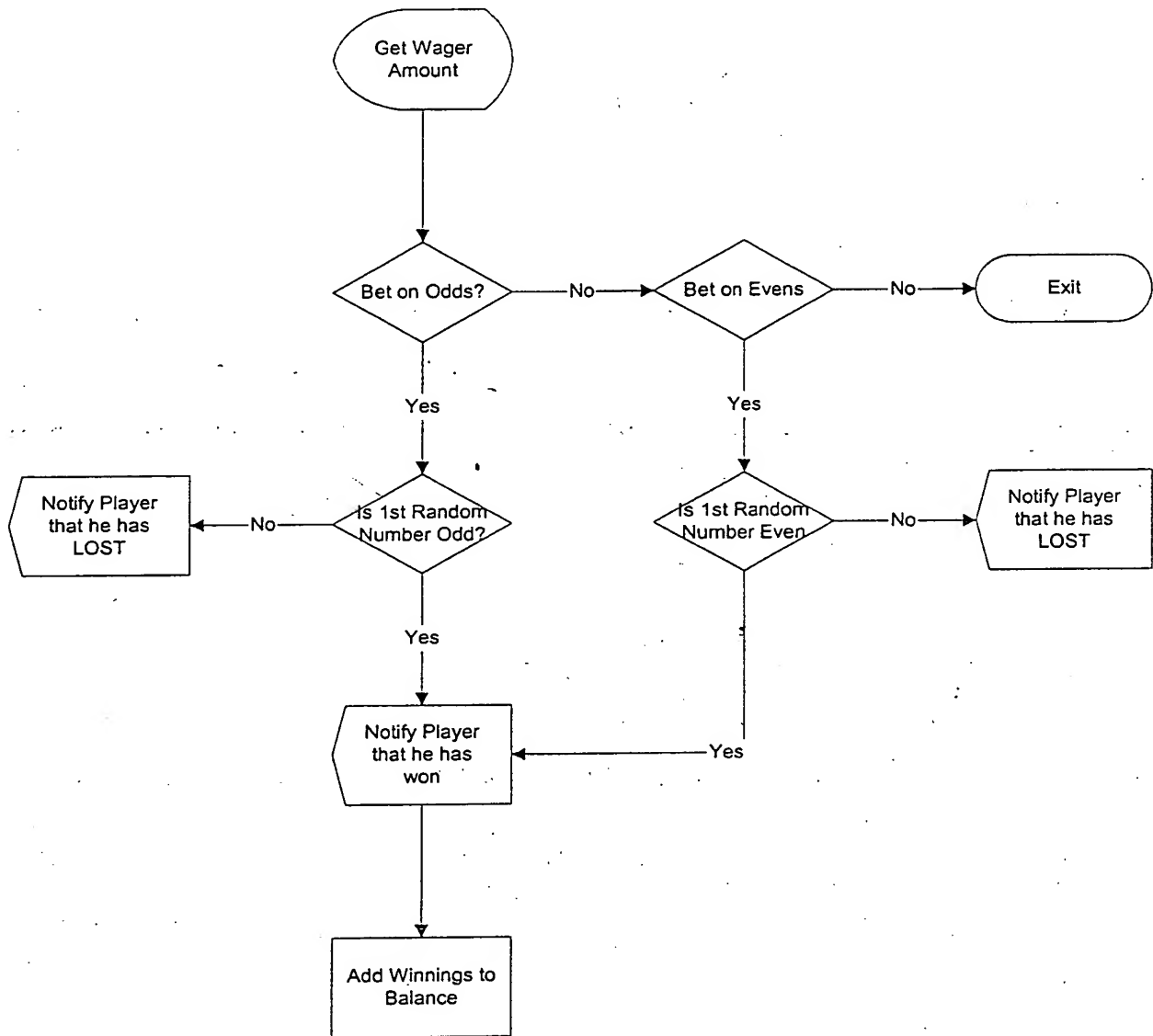


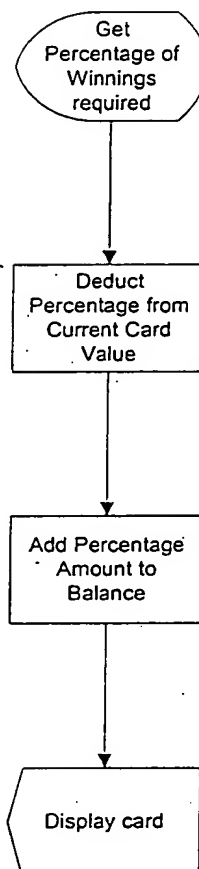
FIG 4C





ES 4D





ESG 4F

*W. Fisher*

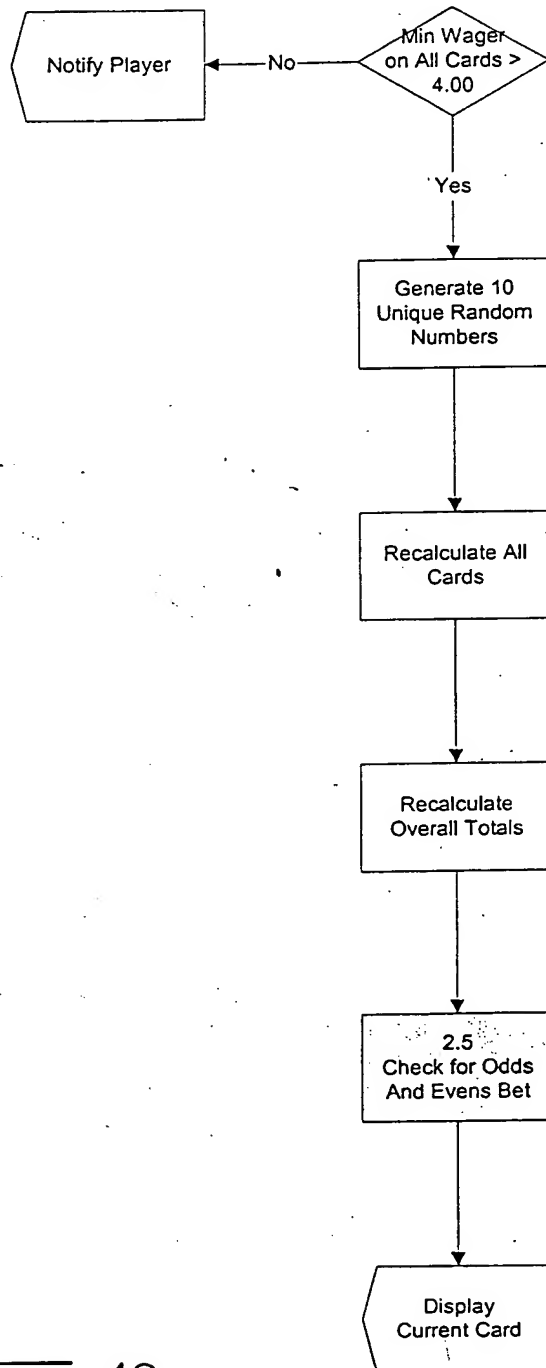


FIG 4G